**Test Results for Hardware Write Block Tool:  
Guidance Software Tableau Firmware Version T35u**

**Tool Description**

Tool Name: Tableau   
Firmware Version: T35u   
Tool Manufacturer: Guidance Software

**Testing Organization**

Organization conducting test: Bowling Green State University – CS 5320

Contact: S. Roy (sanroy@bgsu.edu)  
Report date: 12/5/2018***.***   
Authored by: Nathan Light   
Reviewed by: Seun Shadar.

Reviewed by date: 12/7/2018  
Approved:***.***   
Approved by date:

This test report was generated using CFTT's Federated Testing Forensic Tool Testing Environment, see [Federated Testing Home Page](http://www.cftt.nist.gov/federated-testing.html).

**How to Read This Report**

This report is organized into the following sections:

1. Tested Tool Description. The tool name, version and vendor information are listed.
2. Testing Organization. Contact information and approvals.
3. How to Read This Report (this section).
4. Results Summary. This section identifies any significant anomalies observed in the test runs. This section provides a narrative of key findings identifying where the tool meets expectations and provides a summary of any ways the tool did not meet expectations. The section also provides any observations of interest about the tool or about testing the tool including any observed limitations or organization imposed restrictions on tool use.
5. Test Environment. Description of hardware and software used in tool testing in sufficient detail to satisfy the testing organization's policy and requirements.
6. Test Result Details by Case. Automatically generated test results that identify anomalies.
7. Appendix: Additional details. Additional details for each test case.

**Results Summary**

The tool did meet my expectations. It passed all of the write tests conduction by NIST. We also tried to move files on the disk ourselves with the hardware write blocker attached, and it did not allow us to do so.

**Test Environment**

Hardware: The hard disk mentioned above was attached to the hardware write blocker, which was then attached to a lab computer (Dell all in one) in Hayes 020 at Bowling Green State University.

Software: The analysis was performed in an iso image provided by NIST running on a virtual machine. Resources to the virtual machine were allocated using Oracle virtual box.

Tableau Firmware Version: T35u

**Test Result Details by Case**

This section presents test results grouped by case.

**FT-HWB-SATA**

**Test Case Description**

Test a write blocker’s ability to write-protect a SATA drive. This test can be repeated to test multiple types of connections (interfaces) between a computer and the write blocker. Test the ability of the write blocker to block write commands from the ATA and SCSI command sets issued from a test computer from modifying a SATA drive.

**Test Drive Description**

Manufacturer, model & size of the test drive used for this test: The hard drive as a 160gb drive manufactured by western digital.

**Test Evaluation Criteria**

For each computer to blocker connection tested, the number of ‘writes not blocked’ should be 0.

**Test Case Results**

The following table presents results for the test case.

|  |  |  |
| --- | --- | --- |
| Test Results for FT-HWB-SATA | | |
| **Computer to Blocker Connection** | **Write Commands Sent** | **Writes Not Blocked** |
|  |  |  |
| USB 3 | 36 | 0 |

**Case Summary**

Test drive unchanged.

**Appendix: Additional Details**

**FT-HWB-SATA**

**USB 3**

/usr/lib/cgi-bin/test-hwb Wed Dec 5 19:04:42 2018

@(#) test-hwb.c Linux Version 1.3 created 05/17/18 at 15:05:48

compiled May 17 2018 15:06:05 with gcc Version 5.4.0 20160609

@(#) wrapper.c Linux Version 1.5 support lib created 08/03/17 at 13:05:44

@(#) ataraw.c Linux Version 1.3 support lib created 08/03/17 at 13:05:44

@(#) ataraw.h Linux Version 1.3 created 08/03/17 at 13:06:12

cmd: /usr/lib/cgi-bin/test-hwb -bh -p /media/cftt/FT-LOGS/FT-HWB-sata/ Nathan Hayes020 FT-HWB-sata usb3 sata /dev/sdb

operator: Nathan

host: Hayes020

test case: FT-HWB-sata

connection type: usb3

drive/media type: sata

device: /dev/sdb

device type (ATA or SCSI - /usr/lib/cgi-bin/test-hwb tries to guess): ATA

48-bit Address Feature Set: NOT SUPPORTED

Opcode Command Name Status Lba/Sector Result

30h (ATA) WRITE SECTOR(S) Sent 12288 Unchanged

CAh (ATA) WRITE DMA Sent 51712 Unchanged

CCh (ATA) WRITE DMA QUEUED Sent 52224 Unchanged

C5h (ATA) WRITE MULTIPLE Sent 50432 Unchanged

31h (ATA) WRITE SECTOR(S) w/o retries Sent 12544 Unchanged

CBh (ATA) WRITE DMA w/o retries Sent 51968 Unchanged

3Ch (ATA) WRITE VERIFY Sent 15360 Unchanged

34h (ATA) WRITE SECTOR(S) EXT Sent 13312 Unchanged

39h (ATA) WRITE MULTIPLE EXT Sent 14592 Unchanged

CEh (ATA) WRITE MULTIPLE FUA EXT Sent 52736 Unchanged

3Bh (ATA) WRITE STREAM EXT Sent 15104 Unchanged

35h (ATA) WRITE DMA EXT Sent 13568 Unchanged

3Dh (ATA) WRITE DMA FUA EXT Sent 15616 Unchanged

36h (ATA) WRITE DMA QUEUED EXT Sent 13824 Unchanged

3Eh (ATA) WRITE DMA QUEUED FUA EXT Sent 15872 Unchanged

3Ah (ATA) WRITE STREAM DMA EXT Sent 14848 Unchanged

38h (ATA) CFA WRITE SECTORS W/O ERASE Sent 14336 Unchanged

CDh (ATA) CFA WRITE MULTIPLE W/O ERASE Sent 52480 Unchanged

C0h (ATA) CFA ERASE SECTORS Sent 49152 Unchanged

0Ah (SCSI) WRITE 6 Sent 2576 Unchanged

2Ah (SCSI) WRITE 10 Sent 10768 Unchanged

AAh (SCSI) WRITE 12 Sent 43536 Unchanged

8Ah (SCSI) WRITE 16 Sent 35344 Unchanged

7Fh (SCSI) WRITE 32 Sent 32528 Unchanged

2Eh (SCSI) WRITE AND VERIFY 10 Sent 11792 Unchanged

AEh (SCSI) WRITE AND VERIFY 12 Sent 44560 Unchanged

8Eh (SCSI) WRITE AND VERIFY 16 Sent 36368 Unchanged

7Fh (SCSI) WRITE AND VERIFY 32 Sent 32529 Unchanged

41h (SCSI) WRITE SAME 10 Sent 16656 Unchanged

93h (SCSI) WRITE SAME 16 Sent 37648 Unchanged

7Fh (SCSI) WRITE SAME 32 Sent 32530 Unchanged

3Fh (SCSI) WRITE LONG 10 Sent 16144 Unchanged

9Fh (SCSI) WRITE LONG 16 Sent 40720 Unchanged

32h (ATA) WRITE LONG Sent 12800 Unchanged

33h (ATA) WRITE LONG w/o retries Sent 13056 Unchanged

45h (ATA) WRITE UNCORRECTABLE EXT Sent 17664 Unchanged

36 writes sent, 0 write(s) not blocked, 0 write commands unsupported.

RESULTS: test drive unchanged

run start Wed Dec 5 19:04:42 2018

run finish Wed Dec 5 19:04:42 2018

elapsed time 0:0:0

Normal exit

Status Key:

Sent - the ioctl used to send this command returned without error and the ATA error bit (if applicable) was not set.

Not supported - the ioctl used to send this command return with an error status or the command completed with the ATA error bit set.

Test terminated - the test was terminated for dangerous commands because 3 or more previous commands were not blocked.

Result Key:

Unchanged - no changes to the test drive were detected.

Not Blocked - sending this command resulted in a change to the test drive. This command was NOT blocked!

n/a - Not applicable.

**Test Setup & Analysis Tool Versions**

Version numbers of tools used are listed.

|  |
| --- |
| **Setup & Analysis Tool Versions** |
| test-hwb.c Linux Version 1.3 created 05/17/18 at 15:05:48 |

Tool: @(#) ft\_hwb\_prt\_test\_report.py Version 1.2 created 04/26/18 at 10:11:19   
OS: Linux Version 4.13.0-37-generic   
Done: 2018-12-05 19:05:07.903669   
Federated Testing Version 3.1, released 5/25/2018

END of REPORT